

REMARKS

This response is intended as a full and complete response to the final Office Action mailed April 14, 2006. In the Office Action, the Examiner notes that claims 1-36 are pending and rejected. By this response, claims 1, 3, 8-10, 13, 16, 18, 25, 33, and 35 are herein amended.

In view of the foregoing amendments and the following discussion, Applicants submit that none of the claims now pending in the application are anticipated or obvious under the respective provisions of 35 U.S.C. §§102 and 103. Therefore, Applicants believe that this application is now in condition for allowance.

It is to be understood that Applicants, by amending the claims, do not acquiesce to the Examiner's characterizations of the art of record or to Applicants' subject matter recited in the pending claims. Further, Applicants are not acquiescing to the Examiner's statements as to the applicability of the art of record to the pending claims by filing the instant response with amendments.

REJECTIONS

35 U.S.C. §102

Claim 18

The Examiner has rejected claim 18 under 35 U.S.C. §102(e) as being anticipated by Bellinger (U.S. 2002/0169858, hereinafter "Bellinger"). Applicants respectfully traverse the rejection.

In general, Bellinger teaches a method and device for broadband network service delivery. More specifically, Bellinger discloses that a central Service Creation Platform (SCP) is located at the service provider's premises. The SCP provides the service provider with a common platform from which a service provider administrator can create and deploy new services, manage services, and record and aggregate billing records. (Bellinger, Abstract). As taught in Bellinger, using the SCP, the service provider administrator can create service offerings and advertise the availability of the service offerings to individual

customers or groups of customers, which may then subscribe to one or more of the advertised services.

Bellinger, however, fails to teach or suggest each and every element of Applicants' invention of at least claim 18, as arranged in the claim. Namely, Bellinger fails to teach or suggest at least the limitation of "an enhanced application portal (EAP), for providing a user interface to a VPN customer user, and receiving therefrom VPN administration commands adapted to configure a VPN," as taught in Applicants' invention of at least claim 18. Specifically, Applicants' invention of claim 18 recites:

"A dynamic virtual private network (VPN) manager, comprising:
an enhanced application portal (EAP), for providing a user interface to a VPN customer user, and receiving therefrom VPN administration commands adapted to configure a VPN;

a policy server, for communicating configuration parameters to network elements providing said VPN, said network configuration parameters determined according to VPN administration commands and profiles associated with said VPN administration commands; and

a directory server, for storing VPN topology and operational parameters and providing said VPN topology and operational parameters to said policy server and said EAP, said VPN topology and operational parameters adapted for being updated by said VPN customer user via said EAP."

(Emphasis added).

Applicants' invention is directed toward remote, dynamic management of customer virtual private networks (VPNs). Applicants' invention enables a VPN customer user to remotely, dynamically manage a VPN of a VPN customer with which the VPN customer user is associated. Applicants' invention of claim 18 includes an enhanced application portal (EAP) for providing a user interface to the VPN customer user, and for receiving VPN administration commands adapted to configure the VPN. Furthermore, Applicants' invention of claim 18 includes a policy server and a directory server, which facilitate remote management of the VPN by the VPN customer user using the EAP.

By contrast, Bellinger merely teaches a system having a management system by which a service provider administrator, not a customer user, may define service offerings and advertise the defined service offerings to individual

customers or groups of customers. Bellinger is completely devoid of any teaching or suggestion of any VPN configuration capabilities whatsoever, much less providing a user interface by which a VPN customer user may provide VPN administration commands adapted to configure the VPN, as taught in Applicants' invention of at least claim 18. The teachings of Bellinger and, more specifically, the differences between the teachings of Bellinger and Applicants' invention, may be better understood with respect to at least the following portions of Bellinger:

"[0052] An SDP may also provide a service portal, which delivers the customer experience and is normally in the form of a web page accessible to the customer. Service portals can be customized to address the needs of specific subscribers or groups of subscribers. Using the service portal, the customer can select services of interest. The selected services are then set up by the central controller, which exchanges messages with the service agent 24 at the customer's SDP.

[0053] It will be instructive to consider how a service provider wishing to offer a new service to its customers would proceed in accordance with the invention....

[0054] Once the service drivers have been obtained, the necessary software modules are installed in the central controller 26. A new Service Definition is entered in the LDAP directory, which can be viewed by the Service Provider Administrator on the central controller 26. At this point, the Service Definition can be associated with an SDP and used to create Service Offerings to customers or groups of customers.

[0055] Using a Firewall Service as an example shows how a service provider makes a Security Offering available to corporate users. The service example might be called "Firewall Offering" and come in two variants, "Firewall High" and "Firewall Low". "Firewall High" is a restrictive offering that allows very little to pass through the firewall. "Firewall Low" is a more permissive offering, enabling the transmission of a variety of protocols through the firewall....

[0057] It will be appreciated that the policy information in the Service Definition is abstract, and can be applied equally well to firewalls from a wide variety of vendors. The service drivers mediate with vendor specific instruction sets. As a result the same

security definition can be used as the basis for offerings sold to subscribers who are served by a variety of network architectures, in sites that are served by different sizes, revision levels, or vendors of firewall technology. This is particularly valuable in an environment where thousands of users may require a policy change quickly in a very diverse environment. An example of this would be the requirement to update firewall policy in response to a hacker threat.

[0058] Having installed the Service Definition in the LDAP directory of the central controller 26, the next step is to configure the (SDPs) 20. The SDPs communicate with the central controller 26 using the service delivery agents. Prior to downloading the service driver, an administrator at the central controller first logs on to the SDP and defines its name and IP address.

[0059] If desired, SDPs can be grouped in the controller. Grouping can be based on geographic location, customer site, etc. and the Service Provider has the flexibility to create as many group levels as desired. By creating SDP groups, actions can be performed to individual SDPs or to SDP groups, which in turn performs the action to all SDPs contained within the group--with a single click of the mouse....

[0064] A similar approach can be used to created service offerings. Such offerings might include billing policies, QoS etc. that are made available to customers through an existing portal. New service offerings are derived from either a service definition or another preexisting service offering. The new service offering inherits all the of the configuration and policy information from a particular service definition are it default value. The service provider is able through the user interface at the central controller 26 make any appropriate modifications or customizations to the new service offering's inherited configuration and policies....

[0066] The service offering applies specific values (or references to service specific values) of the policy attributes in the service definition. The service offering is a series of policy attributes that is stored in the LDAP directory for application to a large number of individual subscribers. The controller 26 provides a configuration form on its user interface, through which service provider administrators can make any modifications or customizations to the new Service Offering's inherited configuration and policies....

[0068] The central controller 26 also stores information about customers in its LDAP directory. The directory can be populated

with customer information either from the controller user interface by the Service Provider Administrator or from another system via the an API (Application Programming Interface) provided in the central controller. It will be appreciated that customers can be grouped in any number of levels as desired by the Service Provider, for example by region or industry.

[0069] Any operation that is performed on an individual customer can also be performed on a customer grouped. When an operation is performed on a group, all of the customers within the group are affected. FIG. 7 shows the groupings of customers in the LDAP directory.

[0070] Once Service Offerings have been configured and customer groups created, Service Providers can make Service Offerings available to customers using the controller interface. Service Offerings assigned to a customer are then displayed on the customer's service portal and available for subscription. The flexibility of this feature gives service providers the means to group customers based on common interests and deliver targeted services to those groups in a simple, scalable and economical manner.

[0071] FIG. 9 shows how distinct Service Offerings can be created from the same Service Definition and provided to different customers. The customers 28 have their own portal interfaces, typically web pages, provided by local SDPs 20. The customers are presented with service options through their respective portals and can make requests which are passed to the central controller 26. This then creates instances of the various service offerings to be run on the SDPs.

[0072] Service Activation is carried out in steps: Service Registration and Service Activation. Service Registration involves a user or business subscribing to a Service Offering (e.g. NetMeeting). This transaction would typically include the customer selecting the level of service that they desire and paying a monthly subscription fee to make the service available for them to use.

[0073] The action of a user logging on to the service portal and using a service (e.g. joining a NetMeeting) constitutes the Service Activation step. The central controller gives the Service Provider the flexibility to generate a billing event on one or both of these steps.

[0074] Once a Service Offering has been assigned to a customer or

customer group, provided that a user has the permission to subscribe to a service, the service offering is advertised on the customer service portal. Upon registration, the central controller creates a registration policy document and stores it in the directory with the associated customer. A sample registration document is shown in FIG. 10.

[0075] This Service Instance enables the Service Provider to modify the service delivered to an individual customer, without affecting other customer services. It also provides the ability to modify the parent service offering and have the changes propagated to all of the customers that have subscribed to the service.” (Bellinger, Para. 52 – Para. 75, Emphasis added).

From the cited portions of Bellinger, it is abundantly clear that Bellinger teaches a management system by which a service provider administrator may define service offerings, and advertise the defined service offerings, to a customer or group of customers. As specifically stated in Bellinger, Bellinger is directed toward “...giv[ing] service providers the means to group customers based on common interests and deliver targeted services to those groups in a simple, scalable and economical manner.” (Bellinger, Para. 70, Emphasis added). A service management system which enables a service provider user to define and advertise a service offering, as taught in Bellinger, is simply not a VPN management system including an enhanced application portal which enables a VPN customer user to provide VPN administration commands adapted to configure the VPN, as taught in Applicants’ invention of at least claim 18.

Furthermore, although Bellinger teaches a service portal which may be accessed by customer users, the service portal taught in Bellinger merely provides a capability for the customer users to view the advertised service offerings from the service provider and subscribe to the advertised service offerings. In the Bellinger system, customers do not have any capability to define any parameters of the service offerings. Furthermore, since Bellinger is completely devoid of any teaching or suggestion of any VPN management capabilities, Bellinger simply cannot teach or suggest that the service portal may be used by a customer user to configure a VPN. As such, a service portal by

which a customer user may view a service offering and initiate a request to subscribe to a service offering, as taught in Bellinger, is simply not an enhanced application portal by which a VPN customer user may configure a VPN, as taught in Applicants' invention of at least claim 18.

Moreover, since Bellinger fails to teach or suggest any VPN management or configuration capabilities, Bellinger must also fail to teach or suggest the limitations of "a policy server, for communicating configuration parameters to network elements providing said VPN, said network configuration parameters determined according to VPN administration commands and profiles associated with said VPN administration commands" and "a directory server, for storing VPN topology and operational parameters and providing said VPN topology and operational parameters to said policy server and said EAP, said VPN topology and operational parameters adapted for being updated by said VPN customer user via said EAP," as taught in Applicants' invention of at least claim 18. As such, Bellinger fails to teach or suggest each and every element of Applicants' invention, as arranged in the claim.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added)). Bellinger fails to disclose each and every element of the claimed invention, as arranged in the claim.

As such, Applicants submit that independent claim 18 is not anticipated by Bellinger and is patentable under 35 U.S.C. §102(e).

Therefore, Applicants respectfully request that the Examiner's rejection be withdrawn.

35 U.S.C. §103

Claims 1-2, 5-17, 19-20, 25-30, 33-36

The Examiner has rejected claims 1-2, 5-17, 19-20, 25-30, and 33-36

under 35 U.S.C. §103(a) as being unpatentable over Bellinger in view of Roch (U.S. 2005/0088977, hereinafter “Roch”). Applicants respectfully traverse the rejection.

For at least the reasons discussed hereinabove, Bellinger fails to teach or suggest Applicants’ invention of claim 18. Namely, Bellinger fails to teach or suggest at least the limitation of “an enhanced application portal (EAP), for providing a user interface to a VPN customer user, and receiving therefrom VPN administration commands adapted to configure a VPN,” as taught in Applicants’ claim 18. Since Applicants’ independent claim 1 includes the related limitation of “a dynamic virtual private network (VPN) manager, for providing customer network management and policy server functions including a user interface enabling remote management of a VPN by a VPN customer user,” and one or more parameters “being adapted in response to user commands provided to said dynamic VPN manager by said VPN customer user,” Applicants submit that Bellinger fails to teach or suggest Applicants’ invention of claim 1. Furthermore, Roch fails to bridge the substantial gap as between Bellinger and Applicants’ invention.

In general, Roch teaches dynamic treatment of quality of service (QOS) associated with traffic transported within a secure Virtual Private Network (VPN) tunnel. In particular, Roch teaches attaching a QOS marker to data traffic at an ingress end of a VPN tunnel, and propagation of QOS information through the VPN tunnel to a VPN gateway at the egress side of the VPN tunnel. The QOS information propagated to the VPN gateway at the egress side of the VPN tunnel is then used for egress processing of the tunnel traffic.

In other words, Roch merely teaches management of QOS treatment of data traffic within a secure VPN tunnel. Roch fails to teach or suggest a management system for providing customer network management and policy server functions, where the management system includes a user interface enabling remote management of a VPN by a VPN customer user, as taught in Applicants’ invention of at least claim 1. The insertion of a QOS marker at an ingress side of a VPN tunnel for use in processing at the egress side of the VPN

tunnel, as taught in Roch, is simply not management of network management and policy server functions of a VPN, as taught in Applicants' invention of at least claim 1.

Furthermore, Applicants respectfully submit that a system according to the combination of Bellinger and Roch would merely teach a network including one management system by which a service provider administrator creates and advertises services to customers, and another management system by which a customer may manage QOS treatment of individual VPN tunnels. By contrast, Applicants' invention discloses a dynamic VPN manager having a user interface which enables remote management of a VPN by the VPN customer user where the VPN has at least one of a defined QOS parameter, a defined security parameter, and a corresponding billing rate. As such, Bellinger and Roch, alone or in combination, fail to teach or suggest Applicants' invention of at least claim 1, as a whole.

As such, Applicants submit that independent claim 1 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Furthermore, independent claims 18, 25, and 35 include limitations similar to the limitations of claim 1. As such, for at least the same reasons as discussed with respect to independent claim 1, claims 18, 25, and 35 are also not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

As such, Applicants submit that independent claims 1, 18, 25, and 35 are not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Furthermore, claims 2, 5-17, 19-20, 26-30, 33-34 and 36 depend directly or indirectly from independent claims 1, 18, 25, and 35 and recite additional limitations thereof. Accordingly, for at least the same reasons as discussed above, Applicants submit that these dependent claims are also non-obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

Therefore, Applicants respectfully request that the Examiner's rejection be withdrawn.

Claims 3-4

The Examiner has rejected claims 3-4 under 35 U.S.C. §103(a) as being unpatentable over Bellinger and Roch as applied to claim 1, and further in view of Field (U.S. Patent 6,778,529, hereinafter "Field"). Applicants respectfully traverse the rejection.

Claims 3-4 depend, either directly or indirectly, from independent claim 1. For at least the reasons discussed hereinabove, Bellinger and Roch, alone or in combination, fail to teach or suggest Applicants' invention of at least claim 1, as a whole. Furthermore, Field fails to bridge the substantial gap as between Bellinger and Roch and Applicants' invention.

In general, Field teaches a synchronous switch having a switch interface, a switch controller, and a switch memory. As taught in Field, the switch interface is operable to terminate a bus, the switch controller is operable to determine a type of each received traffic cell, and the switch memory is operable to receive the traffic cell from the switch interface to store the traffic cell at a memory address. (Field, Abstract).

Field, however, fails to teach or suggest any of the limitations of Applicants' invention of at least claim 1. In fact, Field is completely devoid of any teaching or suggestion of any VPN capabilities whatsoever, much less IP services aggregation switches, a dynamic virtual private network (VPN) manager, or any other limitations of Applicants' invention of at least claim 1. As such, Bellinger, Roch, and Field, alone or in any combination, fail to teach or suggest Applicants' invention, as a whole.

As such, Applicants submit that Bellinger, Roch, and Field, alone or in combination, fail to teach or suggest Applicants' invention of claim 1. Furthermore, claims 3-4 depend directly from independent claim 1 and recite additional limitations thereof. Therefore, for at least the same reasons as discussed above with respect to the Examiner's rejection of independent claim 1, dependent claims 3-4 are non-obvious and patentable over Bellinger, Roch, and Field under 35 U.S.C. §103(a).

Therefore, Applicants respectfully request that the Examiner's rejection be withdrawn.

Claims 21-24, 31-32

The Examiner has rejected claims 21-24 and 31-32 under 35 U.S.C. §103(a) as being unpatentable over Bellinger in view of Forslow (U.S. 2005/0088977, hereinafter "Forslow"). Applicants respectfully traverse the rejection.

Claims 21-24 and 31-32 depend, either directly or indirectly, from independent claim 18. For at least the reasons discussed hereinabove, Bellinger fails to teach or suggest Applicants' invention of at least claim 18, as a whole. Furthermore, Forslow fails to bridge the substantial gap as between Bellinger and Applicants' invention.

In general, Forslow teaches a network-based mobile workgroup system. As taught in Forslow, the network-based mobile workgroup system enables a mobile user to select server resources. (Forslow, Abstract). In particular, as taught in Forslow, the network-based mobile workgroup system provides secure data access to mobile clients. Furthermore, users within a mobile VPN may communicate using intra-domain, inter-domain, or remote-access routing. (Forslow, Pg. 4, Para. 0065, 0067).

Forslow, however, fails to teach or suggest Applicants' invention of at least claims 18, as a whole. Forslow is devoid of any teaching or suggestion of an enhanced application portal (EAP), for providing a user interface to a VPN customer user, and receiving therefrom VPN administration commands adapted to configure a VPN," as taught in Applicants' invention of at least claim 18. Moreover, Forslow fails to teach or suggest any of the limitations of Applicants' invention of at least claim 18. Namely, Forslow is completely devoid of any teaching or suggestion of an enhanced application portal (EAP), a policy server, or a directory server, as taught in Applicants' invention of at least claim 18. As such, Bellinger and Forslow, alone or in any combination, fail to teach or suggest Applicants' invention, as a whole.

As such, Applicants submit that independent claim 18 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Furthermore, claims 21-24 and 31-32 depend, directly or indirectly, from independent claim 18 and recite additional limitations thereof. Accordingly, at least for the same reasons as discussed above, Applicants submit that these dependent claims are also non-obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

Therefore, Applicants respectfully request that the Examiner's rejection be withdrawn.

SECONDARY REFERENCES

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to Applicants' disclosure than the primary references cited in the Office Action. Therefore, Applicants believe that a detailed discussion of the secondary references is not necessary for a full and complete response to this Office Action.

CONCLUSION

Thus, Applicants submit that all of the claims presently in the application, are patentable under the provisions of 35 U.S.C. §§102 and 103. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Michael Bentley at (732) 383-1434 or Eamon J. Wall, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

7/14/06

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